

**RECORDS OF *PROPYLEA QUATUORDECIMPUNCTATA*
(COLEOPTERA: COCCINELLIDAE)
FROM LONG ISLAND, NEW YORK: EVIDENCE FOR A
NATURALIZED POPULATION BEFORE 1991¹**

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ABSTRACT: Recently published discussions on the distribution and dispersal of the exotic lady beetle *Propylea quatuordecimpunctata* have suggested that it was not established in either New Jersey or southernmost New York (including Long Island) prior to 1991. Earlier introduction attempts in New Jersey were reportedly unsuccessful, and it has been inferred that the beetle eventually arrived on Long Island by migrating in from the north in 1991. I here present collection data and personal observations that suggest that a naturalized population of this species had become established in western Long Island (Queens County) as early as 1989, and propose alternative models of its establishment.

There is a growing literature on the establishment and spread of the exotic aphidophagous coccinellid *Propylea quatuordecimpunctata* (L.) in northeastern North America, with two recent overviews by Wheeler (1990) and Day *et al.* (1994), which discuss much of the history and prior literature. Introductions were attempted, and presumed to have failed, several times in Delaware, New Jersey, and Oklahoma between 1970 and 1989 (Wheeler 1990, 1993, Day *et al.* 1994). Accidental introduction in Quebec by waterway has been repeatedly suggested as the origin of the present North American population, and Dysart (1988) suggested further introductions to facilitate its spread. The first U.S. records were in Vermont in 1984 and 1985 (Dysart 1988).

Along with my thesis research in North Floral Park, Queens County, New York, from 1982-1987, I collected vouchers of any insects I had not previously encountered in the area, and I continue to do so, in an attempt to develop a faunistic list of insects in the area (unpublished data). I made no collections in 1988, but in 1989 I collected a specimen of *P. quatuordecimpunctata* in nearby Nassau Co., and shortly thereafter saw (but did not collect) another specimen in Floral Park (this species is very distinctive in appearance; Gordon 1985). I collected one more specimen the following year in a nearby park, and saw several more individuals in the area. I have seen this species in Queens on an infrequent but regular basis since then. It was not until 1992 that I first recognized its identity, and not until Day *et al.* (1994) appeared in print that I realized the observations were of possible interest. In a brief visit to the area in 1994, *P. quatuordecimpunctata* was in fact the only coccinellid I en-

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countered, and in 1995, the only other species seen were *Coccinella septempunctata* L. and *Harmonia axyridis* (Pallas), themselves both imported species. The specimens collected are deposited in the Snow Museum, University of Kansas (KU), and the Illinois Natural History Survey (INHS), as follows:

Propylea quatuordecimpunctata: Additional U.S. collection records: NEW YORK: Nassau Co., Roslyn area, 30-VI-1989, D. Yanega (1 specimen, KU); Queens Co., Alley Park [nr. Queens Village], 7-VIII-1990, D. Yanega (1 specimen, KU); Queens Co., Alley Park nr. Queens Village, 28-VI-1995, D. Yanega (1 specimen, INHS); Suffolk Co., East Hampton, Montauk Point St. Pk., 30-VI-1993, D. Yanega (1 specimen, INHS); Suffolk Co., Southard's Pond nr. Babylon Village, 2-VII-1995, D. Yanega (1 specimen, INHS).

DISCUSSION

My collections and observations suggest that a naturalized population of *P. 14-punctata* was present on Long Island as early as 1989. There are a few possible explanations for this, none of which corresponds to the present view of this species' establishment in the eastern U.S. In what I would suggest are decreasing degrees of likelihood, these are: (1) an unintentional introduction event directly via the ports of greater New York, independent of the introductions into Quebec and New Jersey, which remained essentially restricted to Long Island until the Quebec-derived population spread into southern New York (2) part of the natural southward spread from Quebec, placing the leading edge of its advancement two years ahead and 200-300 miles farther south than any other confirmed records have indicated (3) a side-effect of an intentional introduction event into New Jersey, perhaps the program that began in 1989 (Day *et al.* 1994), which failed at the site of introduction but sent successful propagules to nearby Long Island. Any of these alternatives would at least partially invalidate the model proposed by Day *et al.* (1994; their figure 1). Contacts at the American Museum of Natural History and Cornell University in New York report no additional identified specimens from this area over this time period.

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